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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,636	03/23/2004	An Mei Chen	020310D1	4030
23696	7590	11/02/2005	EXAMINER	
QUALCOMM, INC 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			HUYNH, NAM TRUNG	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/807,636	Applicant(s) CHEN ET AL.	
	Examiner Nam Huynh	Art Unit 2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-24 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 7-8, and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Tiedemann, Jr. et al. (US 5,642,398).

A. Regarding claims 1 and 13, Tiedemann, Jr. et al. discloses a communications device registration method comprising the following:

- Receiving information destined for a target mobile station (MS) or a MS that notifies the system controller or mobile switching center (MSC) of its status and location (column 8, lines 10-12).
- A method in where a mobile station registers in a coverage area, then a page is transmitted by corresponding base stations in each of the coverage areas within the paging region centered about the coverage area that the mobile station registered (column 12, lines 36-40).

B. Regarding claims 2, 8, and 14, Tiedemann, Jr. et al. discloses that a MSC records status and location of a MS to relay the message to a particular MS (column 8, lines 15-16).

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C. Regarding claim 7, the limitations are rejected as applied to claim 1.

Furthermore, Tiedemann et al. discloses a MSC (figure 1, item 40) that performs a method for paging.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-6, 9-12, 15-18, 19-20, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. et al. (US 5,642,398) in view of Stephanson et al. (US 6,108,325).

A. Regarding claims 3, 9, and 15, Tiedemann, Jr. et al. discloses that when a MS registers with a particular base station the MSC determines a paging region (column 8 lines 60-64). This region includes the neighboring base stations of the region in which the MS previously initially registered (figure 3, items 140, 160). However Tiedemann, Jr. et al. does not explicitly disclose a neighboring base station controller that can locate the MS if the target MS is not located. Stephanson et al. disclose an optimized SMS delivery algorithm in which a BSC's are utilized in locating a MS and delivering a message (figure 1). Additionally, Stephanson et al. discloses a procedure for locating and transmitting a message to a mobile station consisting of: the mobile switching centre broadcasting a page through all base station controllers under its control; a particular base station controller receiving a response from the mobile station and

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sending a page response to the mobile switching centre indicating the particular cell in which the mobile station is located; the mobile switching centre sending the short message to the particular base station controller; the particular base station controller sending the short message to the mobile station (columns 1-2, lines 65-67, 1-7).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Stephanson et al. to locate a MS in the invention of Tiedemann, Jr. et al. in order to reduce the number of pages instead of paging an entire region.

B. Regarding claims 4, 10, 16, and 20, Stephanson et al. discloses that the base station controller sends the short message to the mobile station (column 2, lines 6-7).

C. Regarding claims 5-6, 11-12, 17-18, and 23-24, Stephanson et al. discloses that if the MSC can locate the MS then it can be delivered directly to the MS via the paging channel (column 3, lines 3-9).

D. Regarding claim 19, Tiedemann, Jr. et al. discloses a method where a mobile station registers in a coverage area, then a page is transmitted by corresponding base stations in each of the coverage areas within the paging region centered about the coverage area that the mobile station registered (column 12, lines 36-40). Tiedemann, Jr. et al. does not explicitly disclose a base station controller consisting of a receiver and a transmitter that pages a target MS. Stephanson et al. discloses that the BSC can send a page message and receive a response from the MS (column 3, lines 37-42). Therefore it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to interface the BSC of Stephanson et al. in the invention of Tiedemann, Jr. et al. in order to minimize unnecessary traffic channel usage.

5. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. et al. (US 5,642,398) and Stephanson et al. (US 6,108,325), as applied to claim 19 above, and further in view of Huang et al. (US 2003/0162553).

A. Regarding claim 21, the combination of Tiedemann, Jr. et al. and Stephanson et al. discloses the limitations of claim 19, but does not explicitly disclose that when a BSC in which a MS registers cannot find a MS, a neighboring BSC is used to find it. Huang et al. discloses an apparatus that generates wireless paging requests that consists of two MSC's, a home area MSC and an out of area MSC. When a MS is not in the home area, an out of area MSC consisting of neighboring base stations is enabled to attempt to locate the MS (page 2, paragraph 0020 and figure 1, items 3-6). The out of area MSC performs the same function as the applicant's BSC because as shown in figure 4, the MSC controls the cellular/PCS equipment and antenna. One ordinary skilled in the art would recognize that the combination of this equipment could be considered to be a base station that serves a cell. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Huang et al. when a MS cannot be located in the invention of Tiedemann, Jr. et al. and Stephanson et al. in order to reduce the number of potential cells that might need to be paged.

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B. Regarding claim 22, Huang et al. discloses that paging requests may be issued by the out of area MSC that receives and requests information from the home are MSC (page 2, paragraph 0021).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam Huynh whose telephone number is 571-272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 571-272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NTH
10/25/05


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